

1  
2 **CLAIMS**

3       1.     At least one computer-readable medium having computer executable  
4 instructions that provide a framework for automating administrative tasks, the  
5 framework comprising:

6             a parser component configured to parse input and to identify at least one  
7 cmdlet based on the input; and

8             an engine component configured to populate a parameter associated with  
9 the cmdlet using information from an input source, and to execute the cmdlet to  
10 generate a precisely parseable stream, wherein the input source comprises the  
11 precisely parseable stream emitted from another cmdlet.

12       2.     The computer-readable medium of claim 1, further comprising a host  
13 component configured to supply the input about at least one command.

14       3.     The computer-readable medium of claim 2, wherein the host  
15 component supplies the input directly to the parser component.

16       4.     The computer-readable medium of claim 2, wherein the host  
17 component supplies the input using a host cmdlet that is processed as one of the  
18 cmdlets within the engine component.  
19  
20  
21  
22  
23  
24  
25

1       5.    The computer-readable medium of claim 1, wherein the cmdlet  
2 includes a base cmdlet that provides a common utility that operates on a plurality  
3 of data types.

4       6.    The computer-readable medium of claim 1, wherein the cmdlet  
5 includes a host cmdlet that provides a system utility.

6       7.    The computer-readable medium of claim 1, wherein the parameter  
7 being associated with the cmdlet comprises a parameter declaration for the  
8 parameter within the cmdlet.

9       8.    The computer-readable medium of claim 1, wherein the parameter  
10 being associated with the cmdlet comprises a reference to an external source  
11 defining the parameter.

12       9.    The computer-readable medium of claim 1, wherein the cmdlet  
13 includes a provider cmdlet that provides functionality associated with an  
14 application.  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

1           **10.**     At least one computer-readable medium containing instructions that  
2 perform the following when executed by one or more computers:

3           receiving input ;

4           associating a cmdlet with the input, the cmdlet identifying at least one  
5 expected input parameter;

6           for each expected input parameter that specifies obtaining data from the  
7 input, populating the expected input parameter with data from the input; and

8           for each expected input parameter that specifies obtaining information from  
9 an input stream to the cmdlet, populating the expected input parameter with the  
10 information, executing the cmdlet to generate an object stream based on the  
11 information and the data, and emitting the object stream, wherein the input stream  
12 comprises the object stream emitted by another cmdlet.

13           **11.**     The computer-readable medium of claim 10, wherein the input  
14 object comprises a .NET object, an XML document, or an Active Directory  
15 Object.

16           **12.**     The computer-readable medium of claim 10, wherein the cmdlet and  
17 the other cmdlet operate in a same process.

18           **13.**     The computer-readable medium of claim 10, wherein the cmdlet  
19 operates in a local process and the other cmdlet operates in a remote process.

20           **14.**     The computer-readable medium of claim 10, wherein the input  
21 comprises a string.

22           **15.**     The computer-readable medium of claim 10, wherein the input  
23 comprises a script.  
24  
25

1           **16.**    A system that provides an administrative tool framework for  
2 automating administrative tasks, comprising:

3           a processor; and

4           a memory, the memory being allocated for a plurality of computer-  
5 executable instructions which are loaded into the memory for execution by the  
6 processor, the computer-executable instructions providing a method for  
7 automating administrative tasks, the method comprising:

8           receiving receive input about at least one command;

9           parsing the input to identify one cmdlet

10          populating a parameter defined within the cmdlet with information from an  
11 input source;

12          executing the cmdlet to generate an object stream; and

13          outputting the object stream.

14          **17.**    The system of claim 16, wherein the input source comprises the  
15 object stream generated by another cmdlet.

1           **18.**     An administrative framework configured to operate on a computing  
2 device, the administrative framework comprising:

3               a means for receiving input;

4               a means for parsing the input into at least one cmdlet, the cmdlet providing  
5 a means for describing at least one expected input parameter associated with an  
6 input source;

7               a means for populating each expected input parameter; and

8               a means for processing the cmdlet in a manner such that the input source  
9 comprises an output stream generated by another cmdlet.

10           **19.**     The administrative framework of claim 18, wherein the one cmdlet  
11 and the other cmdlet execute within a same process.

12           **20.**     The administrative framework of claim 18, wherein the object  
13 stream comprises .NET objects.

14           **21.**     The administrative framework of claim 18, wherein processing the  
15 cmdlet includes populating at least one expected input property with information  
16 obtained from the object stream.

17           **22.**     The administrative framework of claim 18, wherein the at least one  
18 cmdlets includes a base cmdlet provided by the administrative framework.

19           **23.**     The administrative framework of claim 18, wherein the at least one  
20 cmdlets includes a third party cmdlet provided by a third party developer.

21           **24.**     The administrative framework of claim 18, further providing a  
22 means for accessing the cmdlet on a remote computing device.  
23  
24  
25

1           **25.**    A computer readable medium containing instructions that perform  
2 the following when executed by a computer:

3           accepting user input;

4           converting user input to a input format recognized by an administrative tool  
5 framework; and

6           forwarding the input format to the administrative tool framework, the  
7 administrative tool framework configured to:

8           parse the input format;

9           instantiate a cmdlet based on the input, the cmdlet specifying an expected  
10 input parameter; and

11          populating the expected input parameter from an input source.

12          **26.**    The computer readable medium of claim 25, wherein the input  
13 source comprises the input format.

14          **27.**    The computer readable medium of claim 25, wherein the input  
15 source comprises an input stream emitted from another cmdlet.

16          **28.**    The computer readable medium of claim 25, further comprising  
17 providing a host cmdlet that provides an interface between a host application and  
18 the administrative tool framework.

19          **29.**    The computer readable medium of claim 25, wherein the user input  
20 comprises voice input.

21          **30.**    The computer readable medium of claim 25, wherein the user input  
22 comprises a command string entered on a command line.  
23  
24  
25